APPENDIX G

SURVEY RESULTS ON EXISTING AND PLANNED SURVEILLANCE SYSTEMS

EXISTING AND PLANNED SURVEILLANCE SYSTEMS BY AGENCY

Agency	Existing/ Planned	Highway Name	Length, miles	Freeway/ Arterial	Sensor Code (See Table 1)	Quantity	Polling Rate	Data Code (See Table 2)	Communication Medium	Purpose	Satisfaction
Conn. DOT	Existing	Various		F & A	1	370		1,3,4,14	None & Dial-up	Planning data	M
		Various		A	1	800		1,2,3	Data-line	Signal system	H
		I-84	2.2	F	5	15	650 ms	1,3	Data-line	Incident detect	M
		I-91	9.4	F	5	29	650 ms	1,3	Data-line	Incident detect	M
		I-91		F	11	2	13fr/sec	5	Fiber	Incident verf Monitor	L
		I-84, I-91		F	17	3		1,3,6,14	Dial-up	WIM	H
	Planned	I-95	56	F	5	216	Realtime	1,3	Data-line	Incident detect	H
		I-95	56	F	11	91	Realtime	5	T-1 Line	Incident verf Monitor	H
		I-95	56	F	22			13	Fiber	Incident detection algorithm change	H
D.C. DPW	Existing	Mich. Ave. Bridge	0.3	A	20	1	15 min	7, 8	Telephone	Weather	H
	Planned	I-395	1.6	F	11	26	Const	5	Fiber	Incident detect	H
		I-395	1.6	F	9	6	Const	14		Height measure	H
		I-395	1.6	F	22		Const	10	Coax	CO detect	H
		I-295		F	13	1	Const	4, 6	Telephone	Weight measure	M
		South Bridge		A	13	1	Const	4, 6	Telephone	Weight measure	M
		9th St Expr	1	F	11	4	Const	5	Fiber	Accident detect	H
		12th St. Expr	1	F	11	4	Const	5	Fiber	Incident detect	H
DEL DOT	Planned	I-95	30	F	18	1	Const	4	Fiber	Toll collect	
				F	19	1	Const		Fiber	Toll collect	
		Rte 13		F	19	1	Const	6	Fiber	Weigh station	
				F	11	1	Const	5	Fiber	Remote traffic mgmt	
Maine TA	Planned		105	F	18			1, 4, 5	Leased line	ETTM	
MDSHA	Existing	I-270		F	20	2					
		I-695		F	20	3					
		US 50		F	20	1					
		I-270		F	11	2		5			
		US 50		F	11	1		5			
		I-270		F	1	7					

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MD SHA (Cont.)	Planned	I-270	11	F	5	8					
		I-495	42	F	5	16					
		I-95	45	F	5	20					
		US 50	12	F	5	5					
		I-695	51	F	5	25					
		I-895	6	F	5	5					
		I-195	3	F	5	4					
		I-270		F	20	2					
		I-695		F	20	3					
		US 50		F	20	6					
		MD 97		F	20	5					
		I-270		F	11	14		5			
		I-495		F	11	10		5			
		I-95		F	11	7		5			
		I-695		F	11	3		5			
		US 50		F	11	15		5			
		MD 97		F	11	10		5			
		I-270		F	1	11					
		US 50		F	1	14					
		MD 97		F	1	12					
MDTA	Existing	I-95	4	F	11	64		5	Hardwire	Incident detect	H
		I-895	2	F	11	32		5	Fiber	Incident detect	H
	Planned	I-95	14	F	5	6		3	Telephone	Incident detect	
		I-95	14	F	11	3		5	Fiber	Incident detect	
		I-95	45	F	1,5	17		1,3,4	Telephone	Incident detect	
		I-95	1	F	20	4		7,8	Telephone	Weather	
		I-895	16	F	1,5	8		1	Telephone	Incident detect	
		I-395	1	F	11	3		5	Microwave	Incident detect	
NH DOT	Existing	I-95	0	F	1	1		1	Manual	Volume	H
		US 1		A	1	1		1	Manual	Volume	H
		SR-393	0	A		1		6	Telephone	WIM	L

Agency	Existing/ Planned	Highway Name	Length, miles	Freeway/ Arterial	Sensor Code (See Table 1)	Quantity	Polling Rate	Data Code (See Table 2)	Communication Medium	Purpose	Satisfaction
NJHA	Existing	GSP	1	F	22	1		7, 8	Telephone	Ice detection	H
	Planned	GSP	11	F	1	23		1, 2, 3	Fiber	Incident detect	
		GSP	0	F	11	2		5		Incident detect	
		GSP	11	F	1	76		1, 2, 3, 5		Incident detect	
		GSP	11	F	5	12		1, 2, 3, 5		Incident detect	
		GSP	11	F	10	2		1, 2, 3, 5		Incident detect	
		GSP	173	F	11	35		5		Incident detect	
NJTA	Existing		46	F	1	940	60 sec	1, 2, 3, 4	Copper	Incident detect	H
			46	F	3, 6, 10	29	60 sec	1, 2, 3, 4	Copper	Incident detect	H
	Planned		72	F	1	70	60 sec	1	Microwave	Sign control	H
			122	F	22	13	60 sec	9	Microwave	Fog detect	H
			4.4	F	1	10	60 sec	1, 2, 3, 4	Copper	Incident detect	H
				F	11	2		5	Fiber	Incident detect	H
Port Authority of NY & NJ	Existing	Holland/Lincoln Tunnel, GW Bridge, Goethals/ Bayonne Bridges			11				Copper & Fiber	Surveillance	H
		Holland/Lincoln Tunnel		F	5			1, 2, 3, 4		Incident detect	M
		Newark Int Air			10	11			Telephone	Vol-speed monitor	H
		Newark Int Air			11	2		5	Microwave	Surveillance	H
	Planned	Holland/Lincoln Tunnel		F	5	100		1, 2, 3, 4	Fiber	Incident detect	
NYC DOT	Exiting			A	1	1500	2 sec	1, 2, 3, 4	Coax	Incident detect	H
NYS DOT	Existing	I-495 & N. State PkWay	35	F	1	2000	0.25	1, 2, 3	Coax	Incident detect Ramp Metering	H
	Planned	S. State Pkway	30	F	TBD						
		Lower Huds. Vlly	130	F	TBD						
		NY City	150	F	TBD						
NYS Thruway	Planned	I-87	6	F	11	5		5		Incident detect	H
Penn DOT	Existing	I-95	12	F	11	12		1, 5	T1	Incident detect	H
		I-80			20	2					
	Planned	I-476	22	F	1, 11	279		1, 3, 4	Fiber	Incident detect, Ramp meter	

Agency	Existing/ Planned	Highway Name	Length, miles	Freeway/ Arterial	Sensor Code (See Table 1)	Quantity	Polling Rate	Data Code (See Table 2)	Communication Medium	Purpose	Satisfaction
Penn DOT (Cont.)		I-676	2	F	11	6		7	T1	Incident detect	
PTC	Existing	E.W. Mainline	360	F	1, 16	300	30 sec	1, 4, 6	Microwave	Toll collect	M
		N.E. Extension	110	F	1, 16	115	30 sec	1, 4, 6	Microwave	Toll collect	M
		Blue-Kit Tunnel	1	F	11	16		1, 3	Fiber	Incident detect	M
		Blue-Kit Tunnel	1	F	22	10	30 sec	10	Coax	CO detect	M
		LeHigh Tunnel	1	F	1, 11	26	30 sec	1, 3	Fiber	Incident detect	M
RI DOT	Existing			F	1			1, 3	Telephone	Incident detect	M
	Planned								Fiber	Incident detect	
VDOT	Existing	I-66	10	F	1	300	0.25 sec	1, 2, 3	Coax	Incident detect	M
		I-395	10	F	1	250	0.25 sec	1, 2, 3	Coax	Incident detect	M
		I-66	10	F	11	13	Const	5	Coax	Incident detect	M
		I-395	10	F	11	26	Const	5	Coax	Incident detect	M
		I-95		F	11	9	Const	5	Coax	Incident detect	M
		I-95		F	20	10	Const	7, 8, 9	Telephone	Road conditions	M
		I-95	0.05	F	1	1		1, 3, 4	Telephone	SPD	H
		I-95	0.05	F	17	1		6	Telephone	LTPP	H
		I-295	0.1	F	1	1		1, 3, 4	Telephone	SPD	H
		I-295	0.1	F	17	1		6	Telephone	LTPP	H
		I-64	0.05	F	1	1		1	Telephone	SPD	H
		I-64	0.05	F	17	1		6	Telephone	LTPP	H
		I-564	0.05	F	1	1		1, 3, 4	Telephone	SPD	H
		I-564	0.05	F	17	1		6	Telephone	LTPP	H
	Planned	I-64	12	F	1, 17	360	60 sec	1, 2, 3, 4	Fiber	Incident detect, Classification, Ramp meter	H
		Rte 44	6	F	1, 17	180	60 sec	1, 2, 3, 4	Fiber	Incident detect, Classification, Ramp meter	H
		I-264	1	F	1, 17	60	60 sec	1, 2, 3, 4	Fiber	Incident detect, Classification, Ramp meter	H
		I-95	20	F	1	1000	0.25 sec	1, 2, 3, 4	Fiber	Incident detect	
		I-66	20	F	1	1000	0.25 sec	1, 2, 3, 4	Fiber	Incident detect	

Agency	Existing/ Planned	Highway Name	Length, miles	Freeway/ Arterial	Sensor Code (See Table 1)	Quantity	Polling Rate	Data Code (See Table 2)	Communication Medium	Purpose	Satisfaction
VDOT (Cont.)		I-66		F	11	11	Const	5	Fiber	Incident detect	
		I-95		F	11	44	Const	5	Fiber	Incident detect	

TABLE 2: Sensor Data Types

Data Type	Code
Volume	1
Occupancy	2
Speed	3
Classification	4
Video Image	5
Weight	6
Pavement Temperature	7
Pavement Condition (Dry/wet/icy)	8
Visibility	9
CO-level	10
NOx-level	11
HC-level	12
Other environmental	13
OTHERS	14

TABLE 1 Sensor Codes

Sensor Category	Sub-category	Sensor Code
Vehicle detector	Inductive Loop	1
	Magnetic	2
	Magnetometer	3
	Pressure	4
	Radar	5
	Sonic, pulsed	6
	Sonic, continuous wave	7
	Light emission photo-electric	8
	Infrared	9
	Video Image Processing	10
CCTV		11
Aerial Surveillance		12
Weigh-in-Motion (WIM)	Bending plate systems	13
	Capacitive systems	14
	Shallow weigh scales	15
	Deep-pit weigh scales	16
	Piezo-electric axle load sensors	17
Automated Vehicle Identification (AVI), including ETTM		18
Automated Vehicle Location (AVL)		19
Environmental/Weaher	SCAN	20
	LIDAR	21
	Other Environmental	22
OTHERS		23